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PRODUCT SELECTION EXPERT SYSTEM

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VII. CLAIMS

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WHAT IS CLAIMED IS:

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1. A system for product selection, the system comprising:

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a. a CPU;

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b. a memory operatively connected to the CPU, the memory containing a program adapted to be executed by the CPU and the CPU and memory cooperatively adapted for presenting a user interface and expert interface to an expert system for product selection;

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c. a expert-interface code segment embodied on a computer-readable medium configured and adapted for:

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i. creating and modifying via a graphical user interface a graphically-displayed tree structure representing a plurality of product applications;

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ii. associating and modifying via a graphical user interface one or more use condition with each node of the tree structure; and

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iii. associating and modifying via a graphical user interface one or more suitability ratings for a plurality of applications;

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iv. creating and modifying via a graphical user interface a list of products

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v. associating and modifying via a graphical user interface one or more product with each leaf node of the tree structure;

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- 1 vi. associating via a graphical user interface use condition
- 2 choices with each product
- 3 vii. associating via a graphical user interface suitability
- 4 ratings for each product
- 5 d. a user-interface code segment embodied on a computer-
- 6 readable medium configured and adapted for
- 7 i. selecting via a graphical-use interface a path in the tree
- 8 structure, and for displaying on the same window of the
- 9 graphical-use interface:
- 10 1. the products associated with the leaf node of the
- 11 selected path;
- 12 2. the use conditions associated with each node of
- 13 the selected path; and
- 14 3. the product usability suitability indicators
- 15 associated with each node of the selected path;
- 16 ii. selecting via the same window of the graphical-use
- 17 interface one or more of the use conditions associated
- 18 with the nodes of the selected path and for entering the
- 19 user-defined relative importance of the product usability
- 20 suitability indicators for the intended application of the
- 21 products associated with the leaf nodes of the selected
- 22 path;
- 23 iii. comparing the selected use conditions with the displayed
- 24 products, wherein products not having such selected use
- 25 conditions as attributes are filtered out of the displayed
- 26 list of products;
- 27 iv. comparing the entered relative importance of the product
- 28 usability suitability indicators with the product usability

- 1 suitability indicators associated with the displayed
2 products, associating a score with each displayed product
3 indicating the correlation of the comparison, and
4 displaying the score with the product; and
- 5 v. printing the resulting product list, corresponding suitability
6 scores, selected tree path, selected use conditions, and
7 entered relative importance of product usability suitability
8 indicators.
- 9 2. The system of claim 1, wherein product usability suitability indicators
10 are ranked by user-definable importance factors.
- 11 3. The system of claim 1, further comprising printing the resulting product
12 list in sorted order of highest score first.
- 13 4. The system of claim 1, wherein the user-interface code segment is
14 real-time, interactive for permitting a user to change one or more
15 selections and to evaluate any resulting changes in the product list.
- 16 5. The system of claim 1, wherein the user-interface code segment
17 presents all user selection in a single window permitting a user to
18 change one or more selections in any sequence independent of the
19 order in which the selections were first made.
- 20 6. The system of claim 1, further comprising hyperlinks associated with
21 each product in the resulting product list, each hyperlink configured and
22 adapted to retrieve product information regarding the associated
23 product from the Internet or from a database.
- 24 7. The system of claim 1, wherein the products associated with each leaf
25 node comprise lubricating products.
- 26 8. The system of claim 1, wherein the tree, use conditions, and product
27 usability suitability indicators are configured and adapted to permit

- 1 performance related matching of lubricating products to individual
2 lubricating needs.
- 3 9. A system for product selection, the system comprising:
- 4 a. a CPU;
- 5 b. a memory operatively connected to the CPU, the memory
6 containing a program adapted to be executed by the CPU and
7 the CPU and memory cooperatively adapted for presenting a
8 user interface and expert interface to an expert system for
9 product selection;
- 10 c. a expert-interface code segment embodied on a computer-
11 readable medium configured and adapted for:
- 12 i. creating and modifying via a graphical user interface a
13 graphically-displayed tree structure representing a
14 plurality of product applications;
- 15 ii. associating and modifying via a graphical user interface
16 one or more product with each leaf node of the tree
17 structure;
- 18 iii. associating and modifying via a graphical user interface
19 one or more use condition with each node of the tree
20 structure; and
- 21 iv. associating and modifying via a graphical user interface
22 with each product usability suitability indicators for a
23 plurality of applications;
- 24 d. a user-interface code segment embodied on a computer-
25 readable medium configured and adapted for:

- 1 i. selecting via a graphical-use interface a path in the tree
2 structure, and for displaying on the same window of the
3 graphical-use interface:
 - 4 1. the products associated with the leaf node of the
5 selected path, and hyperlinks associated with each
6 product configured and adapted to retrieve product
7 information regarding the associated product from
8 the Internet or from a database;
 - 9 2. the use conditions associated with each node of
10 the selected path; and
 - 11 3. the product usability suitability indicators
12 associated with each node of the selected path,
13 configured and adapted for ranking by user-
14 definable importance factors;
- 15 ii. selecting via the same window of the graphical-use
16 interface one or more of the use conditions associated
17 with the nodes of the selected path and for entering the
18 user-defined relative importance of the product usability
19 suitability indicators for the intended application of the
20 products associated with the leaf nodes of the selected
21 path;
- 22 iii. comparing the selected use conditions with the displayed
23 products, wherein products not having such selected use
24 conditions as attributes are filtered out of the displayed
25 list of products;
- 26 iv. comparing the entered relative importance of the product
27 usability suitability indicators with the product usability
28 suitability indicators associated with the displayed
29 products, associating a score with each displayed product

- 1 indicating the correlation of the comparison, and
2 displaying the score with the product;
- 3 v. printing the resulting product list in sorted order of highest
4 score first, corresponding suitability scores, selected tree
5 path, selected use conditions, and entered relative
6 importance of product usability suitability indicators;
- 7 vi. wherein the user-interface code segment is real-time,
8 interactive for permitting a user to change one or more
9 selections and to evaluate any resulting changes in the
10 product list;
- 11 vii. wherein the products associated with each leaf node
12 comprise lubricating products; and
- 13 viii. wherein the tree, use conditions, and product usability
14 suitability indicators are configured and adapted to permit
15 performance related matching of lubricating products to
16 individual lubricating needs.
- 17 10. A method for product selection comprising:
- 18 a. selecting via a graphical-use interface a path in a tree structure,
19 and for displaying on the same window of the graphical-use
20 interface:
- 21 i. the products associated with the leaf node of the selected
22 path;
- 23 ii. the use conditions associated with each node of the
24 selected path; and
- 25 iii. the product usability suitability indicators associated with
26 each node of the selected path;
- 27 b. selecting via the same window of the graphical-use interface
28 one or more of the use conditions associated with the nodes of

- 1 the selected path and for entering the user-defined relative
2 importance of the product usability suitability indicators for the
3 intended application of the products associated with the leaf
4 nodes of the selected path;
- 5 c. comparing the selected use conditions with the displayed
6 products, wherein products not having such selected use
7 conditions as attributes are filtered out of the displayed list of
8 products;
- 9 d. comparing the entered relative importance of the product
10 usability suitability indicators with the product usability suitability
11 indicators associated with the displayed products, associating a
12 score with each displayed product indicating the correlation of
13 the comparison, and displaying the score with the product; and
- 14 e. printing the resulting product list, corresponding suitability
15 scores, selected tree path, selected use conditions, and entered
16 relative importance of product usability suitability indicators.
- 17 11. The method of claim 1, wherein product usability suitability indicators
18 are ranked by user-definable importance factors.
- 19 12. The method of claim 1, further comprising printing the resulting product
20 list in sorted order of highest score first.
- 21 13. The method of claim 1, wherein the selecting is real-time, interactive for
22 permitting a user to change one or more selections and to evaluate any
23 resulting changes in the product list.
- 24 14. The method of claim 1, further comprising displaying hyperlinks
25 associated with each product in the resulting product list for retrieving
26 product information regarding the associated product from the Internet
27 or from a database.

- 1 15. The method of claim 1, wherein the products associated with each leaf
2 node comprise lubricating products.
- 3 16. The method of claim 1, wherein the tree, use conditions, and product
4 usability suitability indicators are configured and adapted to permit
5 performance related matching of lubricating products to individual
6 lubricating needs.
- 7 17. A method for product selection comprising:
- 8 a. selecting via a graphical-use interface a path in a tree structure,
9 and for displaying on the same window of the graphical-use
10 interface:
- 11 i. the products associated with the leaf node of the selected
12 path and ;
- 13 ii. the use conditions associated with each node of the
14 selected path; and
- 15 iii. the product usability suitability indicators associated with
16 each node of the selected path for ranking by user-
17 definable importance factors;
- 18 b. selecting via the same window of the graphical-use interface
19 one or more of the use conditions associated with the nodes of
20 the selected path and for entering the user-defined relative
21 importance of the product usability suitability indicators for the
22 intended application of the products associated with the leaf
23 nodes of the selected path;
- 24 c. comparing the selected use conditions with the displayed
25 products, wherein products not having such selected use
26 conditions as attributes are filtered out of the displayed list of
27 products;

- 1 d. comparing the entered relative importance of the product
- 2 usability suitability indicators with the product usability suitability
- 3 indicators associated with the displayed products, associating a
- 4 score with each displayed product indicating the correlation of
- 5 the comparison, and displaying the score with the product; and
- 6 e. printing the resulting product list in sorted order of highest score
- 7 first, corresponding suitability scores, selected tree path,
- 8 selected use conditions, and entered relative importance of
- 9 product usability suitability indicators; and
- 10 f. wherein user-interface is real-time, interactive for permitting a
- 11 user to change one or more selections and to evaluate any
- 12 resulting changes in the product list.
- 13 18. A machine-readable program storage medium tangibly embodying
- 14 sequences of instructions, the sequences of instructions for execution
- 15 by at least one processing system, the sequences of instructions to
- 16 perform steps for:
- 17 a. selecting via a graphical-use interface a path in a tree structure,
- 18 and for displaying on the same window of the graphical-use
- 19 interface:
- 20 i. the products associated with the leaf node of the selected
- 21 path;
- 22 ii. the use conditions associated with each node of the
- 23 selected path; and
- 24 iii. the product usability suitability indicators associated with
- 25 each node of the selected path;
- 26 b. selecting via the same window of the graphical-use interface
- 27 one or more of the use conditions associated with the nodes of
- 28 the selected path and for entering the user-defined relative
- 29 importance of the product usability suitability indicators for the

- 1 intended application of the products associated with the leaf
2 nodes of the selected path;
- 3 c. comparing the selected use conditions with the displayed
4 products, wherein products not having such selected use
5 conditions as attributes are filtered out of the displayed list of
6 products;
- 7 d. comparing the entered relative importance of the product
8 usability suitability indicators with the product usability suitability
9 indicators associated with the displayed products, associating a
10 score with each displayed product indicating the correlation of
11 the comparison, and displaying the score with the product; and
- 12 e. printing the resulting product list, corresponding suitability
13 scores, selected tree path, selected use conditions, and entered
14 relative importance of product usability suitability indicators.
- 15 19. The machine-readable program storage medium tangibly of claim 11,
16 wherein product usability suitability indicators are ranked by user-
17 definable importance factors.
- 18 20. The machine-readable program storage medium tangibly of claim 11,
19 further comprising printing the resulting product list in sorted order of
20 highest score first.
- 21 21. The machine-readable program storage medium tangibly of claim 11,
22 system of claim 1, wherein the user-interface code segment is real-
23 time, interactive for permitting a user to change one or more selections
24 and to evaluate any resulting changes in the product list.
- 25 22. The machine-readable program storage medium tangibly of claim 11,
26 further comprising hyperlinks associated with each product in the
27 resulting product list, each hyperlink configured and adapted to retrieve
28 product information regarding the associated product from the Internet
29 or from a database.